PRELIMINARY REMARKS

Claims 10 to 17 and 19, 20, and 22 to 31 as set forth in Appendix II of this paper are herewith presented for further prosecution in this case. Relative to the version of claims previously before the Examiner, Claim 21 has been canceled, Claim 10 has been amended, and Claims 24 to 31 have been added, as indicated in the listing of the claims.

More specifically, applicants have amended Claim 10 to indicate that the solid mixture may comprise a further active compound provided such further active ingredient is different from aminophosphoric acids such as, e.g., glyphosinate etc. Support for the amendment is provided, e.g., on page 14, indicated lines 24 to 25 and 41, of the application. New Claim 24 to 29 have been added to bring out embodiments of the mixture addressed in Claims 13 and 14 (*new Claim 24*), and in the application

- on page 14, indicated lines 15 to 23 (*new Claims 25 and 31*);
- on page 19, indicated lines 30 to 32 (*new Claims 26 and 31*);
- on page 20, indicated lines 12 to 14 (*new Claims 27 and 31*);
- on page 19, indicated lines 34 to 36, and page 20, indicated line 15, to page 21, indicated line 10 (*new Claims 28 and 31*); and
- on page 21, indicated lines 12 to 19 (*new Claims 29 to 31*).

No new matter has been added.[2)]

In addition to the revisions effected in the claims, applicants have amended the paragraph on page 13, indicated lines 17 to 23, of the application to provide antecedent basis for the features recited in Claims 15 and 16. The respective features are supported in the application as filed on page 2 of the claims, indicated lines 35 to 38, and the amendment therefore also does not add new matter.

Entry and favorable consideration of the attached is respectfully solicited.

The Examiner rejected Claims 10 to 17 and 19 to 23 under 35 U.S.C. §101 as being unpatentable in light of claims 1 to 9 of ***Bratz et al.*** (**US 6,482,772**). The rejection should be withdrawn since the Disclaimer which applicants' file in ***Bratz et al.*** has finally been processed by the U.S. PTO. Favorable action is solicited.

2) Cf., e.g., MPEP §2173.05(i).

Further, the Examiner reiterated the position that the subject matter of Claims 10 to 17 and 19 to 23 was unpatentable under 35 U.S.C. §103(a) in light of the teaching of ***Kocur et al.*** (US **5,258,358**) when taken in view of the disclosure of ***Malik et al.*** (**H224**) and a Product Information Sheet of ***DuPont*** regarding Escort®, Oust® and Telar®. Essentially, the Examiner pointed out

1) that liquid compositions comprising glyphosinate-ammonium and alkyl polyglycosides (*in the following also referred to as* **APGs**), optionally in combination with sulfonylurea herbicides, were described by ***Kocur et al.*** *inter alia* as storage-stable;[3)]
2) that ***Malik et al.***, albeit being silent with regard to sulfonylurea herbicides, showed that APGs may be employed in liquid as well as in solid compositions for agro-chemicals;[4)] and
3) that ***DuPont*** described the formulation of certain sulfonylurea herbicides in form of dispersible granules as being stable,[5)]

arguing:[6)]

> *It would have been obvious to one skilled in the art at the time the invention was filed to prepare a solid composition containing sulfonylurea and alkylpolyglycosides because first sulfonylurea are excellent herbicides and are known to be stable in solid form second, alkylpolyglycosides are known to be excellent surfactant and also can be in the solid form such as granule. Third, that since both the compounds is known to exist in solid form therefore it would have been obvious to prepare a solid composition containing sulfonylurea and alkylpolyglycoside.*

It should be appreciated, however, that the mere fact that two chemicals are separately known to be stable in solid form cannot reasonably be deemed to suggest or even imply that a solid combination of the respective chemicals will be stable. Chemicals not only may react with one another in the solid state, they may even react better in the solid state than in solution as, e.g., illustrated by the enclosed print-out concerning "*Dry Media Reaction*" which is enclosed with this paper.[7)]

It should also be appreciated that, at the time applicants' made their invention, the presence of adjuvants in a solid formulation of a sulfonylurea herbicide was generally deemed to be detrimental to the stability of the sulfonylurea. Although it was well known to apply a sulfonylurea

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3) E.g., Office action page 5, lines 7 to 15, and page 8, lines 4 to 7.
4) E.g., Office action page 6, lines 5 to 17.
5) E.g., Office action page 5, line 15, to page 6, line 4, and page 8, line 20.
6) Office action page 7, lines 9 to 15.
7) Dry media reaction. (2008, January 13). In Wikipedia, The Free Encyclopedia. Retrieved 16:29, April 24, 2008, from http://en.wikipedia.org/w/index.php?title=Dry_ media_reaction&oldid=184104392

herbicide in combination with certain surfactants,[8] the respective surfactants were added to the tank mix only just prior to its use.[9] Correspondingly, the sulfonylurea rimsulfuron was commercialized in form of a double pack of (*i*) water-dispersible granules of rimsulfuron, and (*ii*) a wetting agent which is packed separately from the sulfonylurea. Obviously, each of the separate components (*i*) and (*ii*) of the double pack is storage stable. However, this can not be deemed to imply that a solid formulation comprising the sulfonylurea and the wetting agent would also be stable.

To the contrary, it is deemed to be apparent from the foregoing state of the art at the time at which applicants' made their invention that it was well known and accepted that the incorporation of a wetting agent into a solid formulation of a sulfonylurea herbicide may jeopardized the stability of the sulfonylurea, and thereby impair the storage-stability of the solid formulation.

In addition to the inferences which can be drawn from the respective state of the art at the time applicants made their invention, applicants have provided the results of investigations into the impact which an adjuvant has on the chemical stability of a sulfonylurea in a solid preparation. The respective data are set forth in Table 3, on page 35 and 36 of the application, and the corresponding tests are described on page 35, indicated line 17 to 29, of the application. Accordingly, the solid formulation of Examples 1 to 18 were stored for 14 days at 54°C or for 30 days at 50°C. Subsequently, it was determined how much of the sulfonylurea remained to be present in the solid formulation after storage. Table 3 of the application provides

- in col. 3 the weight percentage in which the active compound was present in the solid formulation before the storage test, e.g., a t_0 *value* of the weight percentage;
- in col. 4 the percentage of active sulfonylurea, relative to the t_0 *value*, which remained after storage for 14 days at 54°C; and
- in col. 5 the percentage of active sulfonylurea, relative to the t_0 *value*, which remained after storage for 30 days at 50°C.

For example, prior to storage the composition of Example No. C1 contained **3.2%** by weight of the sulfonylurea designated as SU 1 in combination with the adjuvant Lutensol® ON 80.[10] The value of "**16**" in col. 3 of the table signifies that only 16% of the t_0 *value* of the sulfonylurea remained in the formulation after storage. Accordingly,

$$100\% - 16\% = 84\%$$

84% of the sulfonylurea had decomposed during storage. With 100% of the sulfonylurea corre-

8) Cf., e.g., page 1, indicated lines 13 to 24, of the application.

9) Cf., e.g., page 1, indicated lines 24 to 27, of the application.

10) Cf. page 23, indicated lines 5 to 23, of the application.

sponding to 3.2% by weight of the solid formulation, this means that the respective solid formulation contained after storage:

$$3.2\% \times 0.16 = 0.512\%$$

only 0.512% by weight of the sulfonylurea.

For the Examiner's convenience, applicants have compiled the results of the foregoing calculations in the following extended version of Table 3. The columns of Table 3 have been maintained (*shaded background*), and additional columns have been inserted indicating

1) the percentage of the sulfonylurea which had decomposed in the course of the storage, designated as "Loss", and
2) the weight percentage of the sulfonylurea in the composition after storage, designated as "% [t_s]".

Additionally, he heading of col. 3 has been abbreviated to "% [t_0]".

Ex.No.	Adjuvant	% [t_0]	Relative level of active SU after 14 d, 54°C			Relative level of active SU after 30 d, 50°C		
			% [t_s] / % [t_0]	Loss	% [t_s]	% [t_s] / % [t_0]	Loss	% [t_s]
C1	Lutensol® ON 80	3.2	16	84	0.512			
C2	Armoblem® 57	3.9	13	87	0.507			
C3	Pluronic® PE 6400	10.4	39	61	4.056			
C4	Lutensol® ON 30	7.3	48	52	3.504			
1	Lutensol® GD 70	5.6	87	13	4.872			
2	AG® 6202	6.3	86	14	5.418			
3	AG® 6202	5.9	95	5	5.605			
4	Atplus® 450	5.9	87	13	5.133			
5	Agrimul® PG 2067	5	78	22	3.9			
6	Lutensol® GD 70	5.15	92.2	7.8	4.748			
7	AG® 6202	5.49				90	10	4.941
8	AG® 6202	5.1	99	1	5.049			
9	Lutensol® GD 70	2.77				98	2	2.715
10	Lutensol® GD 70	2.77				100	0	2.77
11	AG® 6202	2.9	62	38	1.798			
12	AG® 6202	2.78	97.5	2.5	2.711			
13	AG® 6202	2.36	70	30	1.652			
15	AG® 6202	7.3	62	38	4.526			
16	Lutensol® GD 70	7.3	70	30	5.11			
18	AG® 6202	4.66	90	10	4.194			

The "Loss" column concerning Examples C1 to C4 shows that *52 to 87%* of the initial amount (*in weight percent*) of the active sulfonylurea were lost under storage conditions when the solid formulation contained an adjuvant different from the APGs referenced in applicants' claims. These data corroborate the detrimental impacts of conventional wetting agents on the chemical stability of a sulfonylurea herbicide in a solid formulation.

In contrast thereto, at most 38% of the active sulfonylurea were lost in the solid formulations according to applicants' claims. Notably, in 11 of the 16 investigated solid formulations in accordance with applicants' invention, the loss of active sulfonylurea was less than 15%, and 50% of the solid formulations in accordance with applicants' invention only suffered a loss of 10% or less.

The Examiner's attention is also respectfully drawn to the data pertaining to Examples Nos. C4, 15 and 16 which are compiled in the following abbreviated reproduction of the foregoing table:

Ex.No.	Adjuvant	% [t_0]	Relative level of active SU after 14 d, 54°C		
			% [t_s] / % [t_0]	Loss	% [t_s]
C4	Lutensol® ON 30	7.3	48	52	3.504
15	AG® 6202	7.3	62	38	4.526
16	Lutensol® GD 70	7.3	70	30	5.11

In each case, the samples were obtained by mixing and grinding

9.6 g of metsulfuron-methyl (*mentioned by* **Kocur et al.** *in col. 2, indicated line 58; "Escort®"*)

3 g of Tamol® NH

6 g of Ufoxane® 3A

15 g of Extrusil®

43.1 g ammonium sulfate

to form a powder, then mixing the powder with 25 parts of the indicated adjuvant, and subsequently granulating the resultant formulation. On the one hand, the data show that the solid mixtures in accordance with applicants' invention exhibit a distinctly improved stability of the sulfonylurea metsulfuron-methyl as compared with the conventional wetting agent employed in Example C4. On the other hand, the data further support that ***Kocur et al.***'s statement[11)]

> *The combined [aqueous] formulations [of glyfosinate-ammonium, optionally other herbicides such as metsulfuron-methyl, and APGs] prepared in this manner ... undergo virtually no chemical changes ...*

at best, cannot reasonably be extended from the aqueous compositions to solid formulations. The

11) Col. 3, indicated lines 29 to 31, of ***US 5,258,358***.

complete statement of ***Kocur et al.***

> *The combined [aqueous] formulations [of glyfosinate-ammonium, optionally other herbicides such as metsulfuron-methyl, and APGs] prepared in this manner are storage-stable, undergo virtually no chemical changes and are simple to handle on use.*[11)]

is therefore clearly not indicative of storage-stability properties of a solid sulfonylurea formulation where the chemical stability of the sulfonylurea is concerned. As noted, chemicals may react with one another in the solid state, and they may even react better in the solid state than in solution.

The foregoing shows that the rationale underlying the Examiner's rejection is fraught with error as to the scope and content of the prior art as it would reasonably understood by a person having ordinary skill in the pertinent technology. The rejection of applicants' claims under the provisions of Section 103(a) is therefore deemed to be in error and should be withdrawn.

However, to further illustrate the particularities of the pertinent technology, and of applicants' invention, applicants are in the process of compiling the results of further investigations in a Declaration. The duly executed Declaration will be presented as soon as it becomes available.

A determination under 35 U.S.C. §103(a) should rest on all the evidence,[12)] and applicants herewith include a request for suspension of action under Rule 103(c) for a period of 3 months. It is respectfully requested that the Examiner await applicant's submission of such Declaration before reconsidering the rejection in view of the entire record.[13)]

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12) See, e.g., *In re Piasecki*, 745 F.2d 1468, 1472–73, 223 USPQ 785, 788; *In re Eli Lilly & Co.*, 902 F.2d 943, 945, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990).

13) See, e.g., *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788; *Eli Lilly*, 902 F.2d at 945, 14 USPQ2d at 1743.